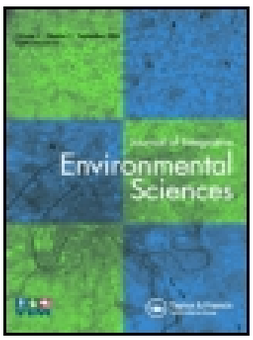

Journal of Integrative Environmental Sciences

ISSN: 1943-815X (Print) 1943-8168 (Online) Journal homepage: http://www.tandfonline.com/loi/nens20

Climate governance in federal Belgium: modest subnational policies in a complex multi-level setting

Sander Happaerts

To cite this article: Sander Happaerts (2015): Climate governance in federal Belgium: modest subnational policies in a complex multi-level setting, Journal of Integrative Environmental Sciences, DOI: 10.1080/1943815X.2015.1093508

To link to this article: http://dx.doi.org/10.1080/1943815X.2015.1093508

Published online: 29 Oct 2015.

JOURNAL OF INTEGRATIVE ENVIRONMENTAL SCIENCES, 2015
http://dx.doi.org/10.1080/1943815X.2015.1093508

Taylor & Francis
Taylor & Francis Group

Climate governance in federal Belgium: modest subnational policies in a complex multi-level setting

Sander Happaerts

Leuven International and European Studies, KU Leuven (University of Leuven), Leuven, Belgium

ABSTRACT

In research on climate governance, increasing attention is given to the potential role of subnational governments as loci of bottom-up policy innovation. This article looks at the role that the Belgian subnational governments can play, from the perspective of the Belgian federal architecture. The findings point out that the Belgian subnational governments do not act as laboratories of experimentation. On the one hand, climate change touches upon political sensitivities that hijack the intergovernmental cooperative mechanisms. On the other hand, the policy-making opportunities of federalism are constrained by the low ambitions on climate change of political actors at all levels, and the system at the same time allows them to maintain those low ambitions. It is argued that the complexities of the Belgian system favour status quo policies for climate change, which makes this analysis a crucial case in the multi-level governance of climate change.

ARTICLE HISTORY
Received 17 February 2015
Accepted 30 July 2015

KEYWORDS
Belgium; climate policy; federalism; multi-level governance; subnational experimentation

1. Subnational governments as laboratories of experimentation

This article departs from the observation stated in the editorial that climate change governance is heavily determined by processes taking place at multiple levels that are mutually influencing, a phenomenon referred to as 'multi-level governance' (see also Gupta 2007; Andonova & Mitchell 2010). One aspect of the multi-level governance of climate change is the influence of negotiations within the United Nations Framework Convention on Climate Change (UNFCCC) on policy-making within the European Union (EU) and its member states, including at the subnational and local level. Such top-down dynamics are increasingly paralleled by bottom-up processes. Probably the most visible examples of that are the ambitious climate strategies of cities worldwide (Bulkeley 2013), which are often challenging less ambitious policies defended at the national level. Scholars of multi-level governance have recently been studying the impact of such local ambitions on global climate policy-making, as well as the interplay of different efforts across governmental levels and with non-governmental actors and dynamics (Jörgensen et al. This volume).

CONTACT Sander Happaerts Sander.Happaerts@kuleuven.be

Somewhat less researched than local governments are the climate policies of subnational governments such as regions, provinces or states. But the interest in 'bottom-up innovation' for climate change at the subnational level is growing, partly spurred by the continued lack of progress in global climate governance (Jörgensen et al. This volume). The current research interest fits in a tradition of environmental federalism, in which the notion of 'laboratories of experimentation' has been applied to denote the capacity of subnational governments to innovate in the implementation of national and international policies, or in the design of their own policies (Jörgensen et al. This volume). The idea, which emerged in the context of US federalism, is based on the assumption that subnational governments are well-placed to experiment with new policy ideas and instruments that, if successful and diffused to other governments, can become drivers for better policies at the national level or even internationally (Osborne 1988; Volden 1997; Rabe 2003; Jörgensen et al. This volume). Especially since the 2000s, research into subnational experimentation has been applied to the case of climate change. Much of that research aims at identifying 'leadership' in climate governance, and assessing the drivers and capacities that subnational governments have for bottom-up innovation (Rabe et al. 2006; Engel & Orbach 2008; Engel 2009; McEwen & Bomberg 2014; Royles & McEwen 2013; Jörgensen et al. This volume).

This article zooms in on the Belgian case, which so far has not been the object of extensive analysis with regard to climate change and multi-level governance. The Belgian subnational governments, nonetheless, are theoretically well-placed to serve as laboratories of experimentation, considering their high policy-making autonomy in many different fields. Since previous research has shown that institutional and political factors are crucial drivers of climate governance in Belgium (Happaerts et al. 2012), the analysis will depart from the institutional architecture of federal Belgium, and the different opportunities and constraints it offers for subnational climate policies. This article therefore explores to which extent the Belgian subnational governments function as laboratories of experimentation. Three of the main characteristics of Belgian federalism – the exclusive division of competences, the principle of no hierarchy and the Europeanization of inter-governmental relations – are the independent variables whose impact on the subnational governments' policies are studied. The analysis will find that an overall low political ambition for climate policy emerges as an intervening variable.

The analysis presented in this article builds upon literature review, previous research and, an extensive analysis of policy documents.[1] The empirical data was triangulated with interviews with three policy officials in Flanders and two in Wallonia, who also gave additional insights into the political dynamics of climate governance in Belgium. The research was conducted early 2012, but the empirical data of the article was updated mid-2013.

The next section outlines the main characteristics of the federal architecture that defines climate policy-making in Belgium. Then, after explaining how climate change efforts are divided in the country, the article turns to the analysis of the climate policies of the subnational governments. Subsequently, the risks of policy failures of the Belgian system are explained, and the article casts a glance at the near future of climate governance in the country. The final section lays out the main conclusions.

Figure 1. Belgian subnational governments.

2. Belgian federalism: extensive policy-making autonomy for subnational governments

This section gives an overview of Belgian federalism and the distribution of competences, with the aim of clarifying the role of the subnational level in multi-level climate governance. It also describes three main characteristics of the Belgian system that are necessary to understand Belgian climate politics. Those are the principles of dual federalism on which the system is built, the inherent need for cooperation, and the politicized relations. The section describes the situation before 2014, when a new state reform was approved, transferring more competences to the subnational level.

Belgium officially became a federal state in 1993, through a gradual series of reforms. Instigated by the ethno-linguistic cleavage between Flemings and Francophones, it is built on a complex architecture that has two types of subnational governments (or 'federated entities'): three Regions (Flanders, Wallonia and Brussels) and three Communities (Flemish, French and German-speaking). The Regions have competences in 'territorial' matters such as environment, spatial planning, agriculture, industry, foreign trade, energy policy, transport or infrastructure. The Communities have competences in 'personal' matters such as education, culture, health or sports (Swenden et al. 2006, p. 865–868). At the Flemish side, the Regional and the Community competences are jointly managed by a single Flemish government. Figure 1 depicts the two types of subnational governments in Belgium, and where they overlap.

The focus in this article is on the Regions, as the Communities do not hold many competences that are relevant for climate change, and consequently do not conduct climate policies. The federal government, whose competences are mainly situated in the areas of justice and home affairs, defence, social security and taxation (Swenden & Jans 2006, p. 885), has only limited responsibilities for climate change. In Belgium, therefore, there is no doubt that the Regions matter for climate governance, and that they control the main powers

that are needed to conduct climate policies. For that reason, the Belgian Regions are often regarded jealously by their European peers.

The Belgian system is built on principles of 'dual' federalism. That means that competences are divided in such a way that each level has a distinct set of responsibilities and can operate (semi-)autonomously from the other (Beyers & Bursens 2006a, p. 36–37). It distinguishes Belgium from systems of 'cooperative' federalism such as Germany. Three of the dual principles, moreover, make the Belgian system overall rather unique. Firstly, competences in Belgium are divided on a strictly exclusive basis, meaning that all aspects (i.e. legislative and executive) of each competence can only pertain to one level of government. That principle was introduced to avoid as much as possible that Flemish and Francophone politicians would have to take decisions together (Swenden & Jans 2006, p. 886). Secondly, the exclusivity of competences extends to Belgium's foreign policy. The *in foro interno, in foro externo* principle prescribes that the subnational governments can conduct an external policy for those policy issues that lie within their competences. That implies that they can include representatives in national delegations for international negotiations and that they can 'speak' at the international level (Van den Brande et al. 2011, p. 73). For instance, for certain matters that relate to subnational competences, subnational ministers represent Belgium in the Council of Ministers of the EU (e.g. Industry, Environment, Fisheries). A concrete illustration of that is the fact that, during the Belgian EU Presidency in 2010, the Flemish Environment Minister presided the Environment Council and led the EU delegation at the Conference of the Parties of the UNFCCC in Cancún. The principle also implies that the federal government can only speak for Belgium when strictly federal competences are at stake. A third principle that distinguishes Belgium from most other federations, is the principle of no hierarchy between federal and subnational laws (Swenden 2006, p. 54). That implies that the federal government cannot impose anything on the subnational governments, and the latter cannot be bound by federal legislation, unlike in many other federal states. Everything that transcends one level of government – and that could thus be considered as 'national' – requires a consensus among the federal and all the subnational governments. Coordination on climate policy in Belgium is therefore always negotiated and never hierarchical. Negotiations to come to a consensus take place among equal partners.

However, while the system is built on those dual principles, multi-level governance in Belgium (not unlike other systems) in practice relies on a high degree of cooperation. That has two reasons. A first reason is that, although competences are divided on a strictly exclusive basis, the division happened in a very fragmented way within policy domains. Some examples elucidate that fragmentation. For environmental policy, the Regions are largely competent, but the federal government retains minor responsibilities such as product standardization. Regarding energy, the Regions have the competence over renewable energy policy and rational energy use, but the federal government controls nuclear energy and off-shore wind energy. As for transport policy, issues such as road transport, seaports, regional airports and public transport are subnational competences, but rail transport and the national airport are federal responsibilities (FOD VVVL 2008). If the successive constitutional reforms had the intended result of neatly dividing all powers in order for both levels to operate in complete autonomy, they should thus be considered a failure, because there are no fully coherent competence packages in any domain. In addition, the federal government retains the control over taxation, a policy instrument that is important for all policies (Swenden & Jans 2006, p. 885).

The second reason why the Belgian system relies on cooperation, is because all decisions that transcend single competences (which is thus the case in many domains) require the approval of all involved governments. As a consequence, a plethora of cooperation mechanisms was created, all functioning on the basis of unanimity. The most typical instruments are the so-called 'cooperation agreements' that are concluded between the federal and the subnational governments (or among subnational governments), on any topic considered relevant. They allow the governments to develop common policies or to jointly exercise their competences in a certain domain (Jans & Tombeur 2000, p. 148). Several hundreds of such cooperation agreements have been concluded. Among the other instruments of intergovernmental relations, the Deliberation Committee is the most formal one (Reuchamps & Onclin 2009, p. 33). It is composed of the Prime Minister, five federal ministers and six subnational ministers (with a perfect equilibrium of Flemish and Francophone representatives). When an issue is brought to the Deliberation Committee, the members have to find a solution within 60 days. It is the 'compromise-building measure of last resort' (Swenden & Jans 2006, p. 887), only used in the most pressing situations when all other mechanisms have failed to settle a dispute. That is also why it is rarely used. Much more important in day-to-day politics are the interministerial conferences. Since 1992, those conferences bring together federal and subnational ministers of a certain policy area (e.g. Environment, Agriculture, Health). Eighteen interministerial conferences are currently operational (FOD Kanselarij 2008). Each conference encloses a number of lower-level working groups for coordination on concrete policy issues, including on the international aspects of those issues (see Happaerts et al. 2012; Van den Brande 2012).

What characterizes intergovernmental cooperation in Belgium, is the fact that no government can ever be forced to participate in intergovernmental negotiations, which is a consequence of the principle of no hierarchy. That means that persuasion and voluntary cooperation are the only leverage for intergovernmental relations (Jans & Tombeur 2000, p. 144). In line with the expectations of multi-level governance, however, cooperation is very often triggered by external requirements, such as European or global commitments (Beyers & Bursens 2006b, p. 1058). Those commitments are the number one argument to bring the different levels of government around the same table, and climate change is a good illustration of this. The reason is that many of the policy domains for which the subnational governments have important competences are domains in which the EU has a large responsibility as well (e.g. environment or agriculture) (Beyers & Bursens 2006b, p. 1063). The 'Europeanization' of policy domains thus brings along a Europeanization of intergovernmental cooperation in Belgium. In many cases, cooperation mechanisms are created in a first instance because the EU requires the output of a certain report or the adoption of a certain position. An intervening factor in the Europeanization of intergovernmental cooperation is that the EU has traditionally had a high normative authority in Belgium, meaning that politicians agree more easily on EU requirements than that they rely on intra-Belgian negotiations. This observation, however, increasingly needs to be nuanced since the outbreak of the European sovereign debt crisis.[2]

A final characteristic of the Belgian system that is relevant in the context of this article, is the politicized character of the multi-level interactions. Belgian federalism is executive (Swenden & Jans 2006, p. 886), which means that intergovernmental relations are controlled by elected officials of both levels of government – rather than by parliaments, as is the case in several other multi-level states (Skogstad 2000, p. 57). That is important, because Belgium is

Table 1. Intra-Belgian burden sharing (Mt = megaton of CO_2-equivalents).

	Kyoto target	EU 20-20-20 targets
	2008–2012 (base year: 1990)	2013–2020 (base year: 2005)
	All sectors	Non-ETS sectors
European Union	−8%	−10%
Belgium	−7.5%	−15%
Flanders	−5.2%	?
Wallonia	−7.5%	?
Brussels	+3.475%	?
Federal government	−2.4 Mt/year via flexible mechanisms −4.8 Mt/year via policy measures	?

a highly politicized country, where major decisions are taken by political rather than administrative officials, and where ministerial cabinets (composed of the personal advisors of each federal and subnational minister), are traditionally the main policy-making actors (Brans et al. 2005, p. 218). Furthermore, Belgium is often labelled a 'particracy' (Peters 2006, p. 1081), because policy and decision-making are monopolized by the political parties. Those are organized on a linguistic basis. In Belgian politics, therefore, there are no nation-wide parties, but only Flemish or Francophone parties, which each cater to their own electorate only. The formation of coalitions for subnational governments is therefore much more straightforward than for a federal government, which is always an amalgam of two party systems. The politicized character of the relations facilitated policy coherence and intergovernmental cooperation until 2004, when the federal government and all subnational governments were controlled by the same coalitions. Intergovernmental relations were then to a large degree 'intra-party' relations (Swenden & Jans 2006, p. 887). When tensions did arise, the threat of political instability at one level of government was the common tool used by political parties to obtain a consensus at the other level. Yet after the subnational elections in 2004, coalitions were installed at the subnational level that for the first time did not mirror the ruling federal coalition. Since then, several political parties have been in power at one level of government, while being in opposition at the other level. Parties in that situation are less willing to 'save' the stability of a government of which they form no part. That political incongruence gravely complicates the resolution of intergovernmental conflicts or policy coherence among different governments (Swenden & Jans 2006, p. 887).

Maesschalck and Van De Walle (2006) argue that the Belgian institutional framework is conducive to policy failures, for instance when policy-making on one side of the language border happens without knowledge of what the other side is doing, or when federal and subnational policies contradict each other. The identification of that possibility counters the predominant tendency in the multi-level governance literature to stress the opportunities and potential advantages of multi-level dynamics, such as bottom-up policy innovation.

3. Sharing burdens and targets within Belgium

The design of climate policies in Belgium basically started with the intergovernmental negotiations on the division of Belgium's Kyoto targets. Before the climate policies of the Belgian subnational governments can be discussed, it must therefore be explained how the burdens of climate mitigation are shared within the country. The issue is a clear illustration of the

multi-level character of climate governance, and of the Europeanization of intergovernmental cooperation in Belgium.

Because of the exclusivity of competences, Belgium does not have a national climate policy. Rather, the federal government and the three Regions should each conduct their own climate policies within the realm of their respective competences. The necessity of dividing the Kyoto targets within Belgium was due to the fact that the Regions are competent for industry, and were thus responsible for the allocation of greenhouse gas (GHG) emission allowances to companies under the European Emissions Trading System (ETS).[3] At the global level, the EU committed to an 8% reduction of GHG emissions compared to 1990 levels in the 1997 Kyoto Protocol, of which the first commitment period ran from 2008 to 2012. Within the EU, a burden sharing agreement was subsequently negotiated in 1998 and formalized in 2002 (Council of the EU 2002), assigning Belgium a reduction obligation of 7.5%. That national target thus needed to be divided among the Belgian governments.

The talks took a long time to get started, as after the conclusion of the EU burden sharing agreement the Belgian governments first invested much energy in setting up the right intergovernmental cooperation mechanisms. The negotiations for an intra-Belgian burden sharing agreement took place within ad hoc administrative and inter-cabinet working groups, and eventually within the Interministerial Conference on the Environment. The approach used in the talks has been characterized as a 'best of both worlds' scenario (Bollen et al. 2006, p. 165), meaning that each Region would advance the target it wanted to commit to, and that the federal government would support reductions with policy measures related to its competences and by applying flexible mechanisms.[4] However, the governments did not agree on a common position, *inter alia* because of the upcoming 2003 federal elections, and the matter was referred to the Deliberation Committee. Prime Minister Verhofstadt finally announced an agreement in March 2004 (FOD VVVL 2009). Flanders committed to a reduction of 5.2%, Wallonia pledged to reduce 7.5% and Brussels could increase its emissions by 3.475%. The individual targets are shown in Table 1.

The targets are a reflection of the positions of the different governments. The Flemish government always insisted that on more reductions in those Regions where that would be economically more efficient (Ministerie van de Vlaamse Gemeenschap 2003, p. 177). While Flanders has an important energy-intensive industry, Wallonia already had fewer emissions by the end of the 2000s than in 1990, the base year of the Kyoto Protocol, because of the phase-out of the heavy coal industry (Van Hecke & Zgajewski 2008, p. 8). Wallonia, however, urged for identical targets for each Region (Bollen et al. 2006, p. 165). Brussels, the small and de-industrialized capital Region, refused to reduce emissions (Van Hecke & Zgajewski 2008, p. 26). As the sum of the three Regions' proposed targets did not result in the 7.5% Belgian target, the federal government committed to implement supporting measures that would reduce 4.8 Mt of CO_2-equivalents per year, and to the purchase of carbon credits equivalent to 2.46 Mt/year through flexible mechanisms (Bollen et al. 2006, p. 166). That was a demand of the Flemish and the Francophone Greens, in power at the federal level at that time, and it represents a typically Belgian compromise, where the federal government literally 'pays the bill' when the Regions' commitments do not suffice.

With the end of Kyoto's first commitment period approaching, negotiations have been started on a second intra-Belgian burden sharing agreement. That was the consequence of the EU's climate and energy package, agreed in December 2008 (the so-called '20-20-20' targets).[5] Under that agreement and the subsequent internal 'effort sharing' deal concluded

within the EU, Belgium needs to reduce its GHG emissions in the so-called non-ETS sectors by 15% by 2020 in relation to 2005 levels (see Table 1).[6] But the negotiations were frozen after the June 2010 federal elections, which triggered an 18-month long political stalemate in Belgium until a new federal coalition was finally installed in December 2011. The principle of no hierarchy and the need to reach a consensus make that no intergovernmental relations can take place as long as one of the actors is absent. As the negotiations for the new burden sharing agreement concern non-ETS sectors (agriculture, transport, buildings and energy), the object of bargaining is now totally different in comparison to the first agreement. Two main issues are likely to dominate the talks. A first thorny issue is the role of the federal government in a post-2012 agreement. A second problem is that, in contrast to the previous burden sharing negotiations, the political landscape is now characterized by incongruent government coalitions. Party political preferences are therefore likely to oppose certain positions. In Flanders, for instance, the Environment portfolio is held by the Christian Democrats, who have not promoted ambitious climate goals so far. But in the Walloon government, the Green party has been urging for more ambitious targets.

The negotiations on an intra-Belgian burden sharing agreement reflect how intergovernmental relations and climate policy-making are both inherently Europeanized. But the discussion also uncovers a general lack of ambition to take proactive action on climate change. It appears that the efforts of the Belgian governments are purely triggered by international commitments, and that de facto nothing would happen without them.

Before turning to the analysis of the subnational climate policies, it is interesting to look ahead at the near future of climate governance in Belgium, in light of recent developments. The installation of the new federal coalition in December 2011 not only marked the end of the longest government formation in contemporary world history, but also a new period of Belgian climate governance: one in which the federal government's role will be reduced to a strict minimum. That has two reasons. On the one hand, the coalition was formed in the context of a severe economic crisis and a European sovereign debt crisis, which pushed the coalition towards very stringent fiscal efforts to reduce its budget deficit. On the other hand, the coalition agreement was accompanied by an institutional agreement for a new Belgian state reform, which will shift a number of competences and responsibilities to the subnational level. Those include some taxation instruments, such as tax breaks for energy-saving investments. Under the denominator of the state reform, but also pushed by the need for budget cuts, many of the measures that the federal government had previously undertaken for climate change were abruptly abolished by the coalition agreement, and after the state reform they will become impossible for the federal government to pursue. That shifts the core of Belgian climate governance even more to the Regions. As a consequence of those dynamics, I not only envisage that the federal climate policy will be reduced to a minimum, but also that the federal government will commit to very little or no emission reductions in a post-2012 agreement. The traditional Belgian compromises that make the federal government 'pay the bill' will be much harder to conclude.

4. The efforts of the regions: different policies, low ambitions

I first describe the policies of Flanders, Wallonia and Brussels separately.[7] Afterwards, some horizontal trends are uncovered.

4.1. Flanders

In Flanders, climate policy has been the object of a specific planning process since 2002, when the first Flemish Climate Policy Plan was issued (Ministerie van de Vlaamse Gemeenschap 2003). The plan was above all meant to institutionalize climate policy in Flanders and to lay the first foundations for future policy measures, when the Flemish commitments under the Kyoto Protocol would become clear. But the plan also advanced a first target for Flanders, i.e. to stabilize GHG emissions to 1990 levels by 2005. While the plan was criticized to entail no further ambitions (De Mulder 2005), the stabilization target was not reached, partly because of the low involvement by sectoral ministers.

The second Flemish Climate Policy Plan that was issued in 2006, was more comprehensive than the first (Vlaamse Overheid 2006). Now clearly designed to reach the Flemish reduction target that was decided in 2004, the plan focused especially on measures in renewable energy, agriculture and forestry, on rational energy use in buildings, and on stimulating measures for the transport sector. It also stipulated that about 20% of the efforts should be reached through the use of flexible mechanisms.

When the end of Kyoto's first commitment period was approaching, it was not entirely clear whether the Flemish reduction target of 5.2% would be reached. While emissions in the ETS sectors are clearly below the allowed level (due to the efforts of the industry but also as a consequence of the economic crisis), the non-ETS sectors display a reduction gap, because of the continuous increase of emissions from transport and buildings (Vlaamse Overheid 2011, p. 7).[8] Precisely those non-ETS sectors form the object of the third Flemish Climate Policy Plan. Guided by the negotiations in the international climate regime, the new plan is divided into a mitigation and an adaptation plan. The mitigation plan needed another approach than the general one followed in the previous plan, as the EU now imposes a yearly reduction target, which is different than having only a single mid-term target. Because of those targets, reduction strategies for each of the non-ETS sectors are needed. A major problem is that Flanders and the other Regions, anno 2013, are still uncertain about their specific reduction targets. That is due to the fact that the intergovernmental negotiations have still not reached an agreement on the intra-Belgian division of the EU's effort sharing deal. One of the main critiques that stakeholders continuously utter with regard to the Flemish climate policy, is precisely its lack of a long-term vision (Minaraad 2009; SERV & Minaraad 2009). Flanders finally decided to adopt a provisional target of 15% for 2020 (compared to 2005 levels) (LNE 2012; Vlaamse Overheid 2013), but the uncertainty caused a serious delay of the policy formulation process.

Much like the previous plan, the use of flexible mechanisms is advanced as an indispensable element of the Flemish climate policy. Differences with the previous period concern mostly the implementation and the financing. This time, the implementation accords a major role to the other sectoral ministers too. That is necessary to guide the reduction strategies of each of the non-ETS sectors. The new plan, however, proposes few new measures to mitigate reduction in those sectors, but relies mainly on existing policies and on intentions for new measures that have not been approved yet by the Flemish government. As for the financing of the new plan, the government conceived a new form of central funding, the Flemish Climate Fund, that is fed by the sales of emission rights to industrial installations and aviation companies. But the repartition of the proceeds of those sales, which is a national affair, is still subject to intergovernmental negotiations.

4.2. Wallonia

The Walloon government issued its first Climate Change Action Plan in 2001, offering mainly an analysis of the current situation in the Region (Ministère de la Région wallonne 2001). In 2007, the more comprehensive Air-Climate Plan was made (Ministère de la Région wallonne 2008), which was presented as one of the main environmental achievements of the coalition at that time. The Plan targeted a variety of domains, such as transport, energy, agriculture, forests, waste and spatial planning, but only a limited part of the actions it proposed was aimed at reducing GHG emissions, while the others concerned other issues of air quality. The government also committed to the use of flexible mechanisms, through participation in an international carbon fund, but only for a very limited amount. In any case, Wallonia will by far exceed the efforts it has to make under its Kyoto target, since in 2010 it already reduced its emissions by 21.4% (Wallonie 2012b), partly due to the economic crisis.

The 2009 subnational elections shook up the Walloon political landscape with a remarkable victory for the Walloon Green party, who entered the government coalition with the Socialists and the Christian Democrats (Happaerts 2012). As the Greens' election campaign focused on the 'green economy' as a solution to the economic crisis, the party used its strong bargaining position to introduce ambitious goals on climate change and sustainable development in the coalition agreement. Consequently, that agreement states that Wallonia aims for a strategy to reduce GHG emissions by 30% in 2020 and by 80–95% in 2050 (Parlement wallon 2009, p. 60). The government commissioned a study that maps out possible scenarios to achieve the 2050 goals (Wallonie 2011). With the study – entitled 'Roadmap towards a low-carbon Wallonia' – Wallonia refers to the EU's Roadmap for moving to a competitive low carbon economy in 2050 (European Commission 2011), and congratulates itself for being the first European subnational government to take such an initiative.

As promised by the coalition agreement (Parlement wallon 2009, p. 60), the Parliament adopted the first Walloon Climate Law by the end of 2012 (Wallonie 2012a). In the absence of a final intra-Belgian burden-sharing agreement, the law codified the targets that the coalition agreement committed to. Wallonia is now legally required to reduce its GHG emissions by 30% in 2020 and by 80–95% in 2050, compared to 1990 levels. The method to do so is inspired by the 'carbon budgets' of the UK's 2008 Climate Change Act. Between 2013 and 2050, five-yearly carbon allowances will be fixed and distributed between sectors (industry, agriculture, services, households, etc.). Each five-year period, a climate plan should adopt specific policy measures to achieve the reductions. While the Law already determined the budgets for the periods 2013–2017 and 2018–2022, the policy plan – entitled Air-Climate-Energy Plan – is not yet adopted.

The level of Wallonia's ambitions can only be assessed against the specific policy measures that are imposed on each sector. The legal basis for Wallonia's reduction targets, which perfectly reflect the EU's objectives (see footnote 5), is certainly commendable. However, observers point out that the 2020 target is hardly ambitious, because Wallonia was already set to achieve a 24% reduction in a business-as-usual scenario (IEW 2013). The novelty therefore lies in the adoption of a long-term target and the specific policy strategies that are still to be defined.

4.3. Brussels

Brussels's first and still only climate policy plan was issued in 2002, immediately after the Johannesburg Summit. As in the case of Wallonia, the plan jointly addresses climate change and air quality (Brussels Hoofdstedelijk Gewest 2002). Yet that combination makes much sense in Brussels, since most of its atmospheric pollutants are also the main sources of GHG emissions (Van Hecke & Zgajewski 2008, p. 27). Most sectoral measures are situated in the areas of transport and rational energy use. 30% of the effort should happen through the use of flexible mechanisms (via an international carbon fund) (Van Hecke & Zgajewski 2008, p. 28). The government frequently emphasizes the special situation of the Region as Belgium's capital, where the industry is already in decline and where much of the pollution is actually 'imported' from Flanders and Wallonia, or linked to commuters who work in Brussels but live outside of it. Those concerns partly explain why the plan is very little ambitious.

In transnational forums, however, Brussels does display significant climate ambitions. For instance, the Region adhered to the Covenant of Mayors, a European initiative through which local governments pledge to achieve and exceed the EU's climate and energy goals for 2020 (Brussels Hoofdstedelijk Gewest 2009b; Covenant of Mayors 2012).

Also Brussels is in the process of formulating a new plan (see Brussels Hoofdstedelijk Gewest 2009a). That is long overdue, since the Air-Climate Plan only covered the period between 2002 and 2010. The priority themes have already been fixed, and largely correspond with the non-ETS-sectors.[9] While no specific goals have yet been made public, Brussels estimates to achieve an emission reduction of 10–15% by 2020. That ambition is starkly below Brussels's pledges in the context of the Covenant of Mayors (which suggests that the large membership of such networks not always implies an equal number of ambitious actors).

4.4. Horizontal findings

After the analysis of the three Regions' climate policies, three observations are brought to the attention. They refer to the large policy-making autonomy, the lack of ambitious goals and the deficiency of a long-term vision.

Policy planning for climate change started around 2001 and 2002 in the three Regions. Several factors contributed to that, such as the presence of the Green party in all government coalitions at that time, and the fact that Belgium held the EU Presidency in 2001, when the ratification of the Kyoto Protocol and the preparation of the Johannesburg Summit figured high on the political agenda. But despite the common timing, differences are observed with respect to the framing of the issue (together with air quality or not) and to the instruments that are applied (e.g. the use of flexible mechanisms). The possibility of such widely diverging subnational policies is a consequence of the absolute policy-making autonomy that Belgian federalism grants to the subnational governments. It does not, however, make coordination any easier and it does not facilitate policy coherence. For instance, it has been found that the multiplicity of different policies and procedures with regard to flexible mechanisms that apply in Belgium is very unattractive to investors (Conix 2009, p. 70).

A second observation is the overall lack of ambitious goals. Even in Wallonia, where reduction targets are now legally fixed, those have not been crystallized into specific mitigation policies yet. Even if the Kyoto targets are reached, aided by the economic crisis and the use of flexible mechanisms, those targets can hardly be labeled as very ambitious. The lack of

ambition reveals a low political will for climate change among the Belgian political elite to reduce emissions domestically. But in addition to a low political will, this article argues that Belgian federalism is also to blame. Indeed, the system allows – or sometimes even encourages – governments to shift their responsibilities upon each other. A central adage in the Flemish policy discourse since 2004 is that Flanders should not bear unreasonable burdens with regard to emission reductions (De Mulder 2005; Vlaamse Overheid 2006, p. 34), pointing towards the energy-intensive Flemish industry and the possibility of other Regions to reduce emissions more efficiently. Moreover, the first Flemish climate policy plan indicated that the stabilization goal could only be reached when certain policies were enacted at the federal level (Ministerie van de Vlaamse Gemeenschap 2003, p. 11). The Walloon plans very frequently point towards measures that should actually be taken at the federal level. In Brussels, the climate policy is very careful not to hinder the capital's remaining industry, and it is quick to stress that many of its environmental problems are actually due to inhabitants of Flanders and Wallonia who commute to Brussels. The federal level engages in such 'externalization' of responsibilities too, as it is completely breaking off its climate measures under the denominator of the next state reform. The Belgian system, where all competences are exclusively yet very incoherently divided among levels of government, facilitates the governments' tendencies to point towards each other to take action on such a complex domain as climate change where their own political ambitions are low.

The manifest lack of a long-term vision on climate policy in Belgium is an obvious third observation. Due to the prolonged political crisis that followed the 2010 federal elections, all intergovernmental negotiations that require political bargaining were frozen. Without those negotiations, it was impossible to come to an agreement on how international commitments that encompass the two levels of government will be arranged, in this case the Belgian reduction targets under the EU effort sharing deal. In the case of climate change, where external obligations are the number one leverage for the Belgian entities to act, in absence of a proactive political engagement, the lack of clarity with regard to those targets had seriously delayed the Regions' ability to prepare their new plans, and to take political decisions for them. Recent developments in Flanders and Wallonia occasioned a remarkable precedent when, in continuous absence of a burden-sharing agreement, the two biggest Regions adopted 'unilateral' targets (with a legal basis in the case of Wallonia), thereby limiting the scope of a future burden sharing agreement to a strict minimum. While it is unclear how those moves influence climate policy-making in Belgium in the future, it is clear that the long stalemate and political difficulties at the federal level seriously hindered the crystallization of a long-term vision on climate policy at all levels of government.

A low policy coherence (because of the large policy-making autonomy, the lack of ambition and the inability to come to a long-term vision can be characterized as policy failures, as described by Maesschalck and Van De Walle (2006). Previous research demonstrated that the Belgian federal architecture is conducive to policy failures in the field of climate change at the national and international level as well (Happaerts et al. 2012). Examples include the fact that Belgium was brought before the European Court of Justice in 2005, for not transposing in time the EU Emissions Trading Directive, or the inability to adopt a Belgian position in UNFCCC negotiations, because of internal battles and ideological divides between the different governments. While many of those policy failures are to a large part attributable to a low political will on the part of political elites to take strong action on climate change, each of the problems is strengthened by the dynamics inherent to the Belgian system. This

underscores that Belgium is a crucial case in contradicting much of the literature's tendency to emphasize the innovative potential of decentralized systems to support the design and implementation of ambitious subnational climate policies.

5. Conclusion

We studied the impact of the main characteristics of Belgian federalism – the exclusive division of competences, the principle of no hierarchy and the Europeanization of inter-governmental relations, as well as the various institutional mechanisms that have been set up as a consequence of these – on the climate policies of the subnational governments. In the analysis, the overall low political ambition for climate policy emerged as an intervening variable. It was found that hat the Belgian subnational governments cannot be considered as loci of bottom-up policy innovation. This is mainly due to a lack of political will for far-reaching measures to reduce GHG emissions, but it is strengthened by the characteristics of Belgian federalism, especially the principle of no hierarchy and the exclusive division of competences.

In Belgium's multi-level system, climate governance in general is not well advanced. Even the policy initiatives that have been taken, are not aimed at fundamental changes that are needed to achieve the transition towards a low-carbon society, which is illustrated by the frequent recurrence to flexible mechanisms at the expense of domestic reduction measures. Although they have multiple assets to conduct ambitious and innovative policies, the Belgian subnational governments are no laboratories of experimentation for climate change. In particular two dynamics of the very complex multi-level architecture prevent policy innovation for climate change.

First, although it is not considered a political priority, climate change is a very sensitive political issue, also in Belgium. The reason is that it touches upon core issues such as the organization of the regional economy, the future of the industry, transport, energy, etc. In such domains very often ideological confrontations arise, for instance between centre-right and centre-left parties, and those can turn into intergovernmental conflicts when governments are ruled by asymmetrical coalitions. Negotiations on climate measures are then easily blocked before elections and during periods of coalition formation. The political sensitivity of climate change in Belgium is illustrated by the fact that the Deliberation Committee had to intervene to strike a deal in 2004, and by the fact that Europeanization pressures are not strong enough to push the governments towards an agreement. In short, ideological differences in a politically sensitive issue appear to hijack the usual mechanisms of coordination and cooperation of the Belgian system, that are crucial for policy-making in complex domains.

Second, the analysis confirmed the multi-level character of climate governance. But in that multi-level structure, this article only identified top-down dynamics. Action in Belgium is exclusively triggered by EU requirements, which follow from the global negotiations. Within Belgium, the subnational governments adopt a wait-and-see attitude. They take up a very defensive position vis-à-vis the commitments that come from higher levels of governance. In the Belgian case, indeed, we see very little examples of bottom-up policy innovation for climate change. It demonstrates that subnational policy-making autonomy in a multi-level setting not only offers opportunities for environmental governance, but that it can also have a limiting effect. The Belgian context gives each government a set of reasons that motivate why more efforts should actually be done by the other partners, and it entails no leverages

to force the subnational governments into a more ambitious role. In such a setting, when there is little political will to take action on an issue, the potential opportunities for experimentation are not put into effect. Belgian climate governance is thus characterized by inertia, both domestically as well as on the international stage.

On the basis of those findings, it is concluded that status quo policies are favoured when politically sensitive issues generate ideological face-offs in a multi-level setting. It needs to be emphasized that not all problems can be explained by the specific Belgian multi-level architecture alone. The core problem, of course, is the lack of political will of the Belgian political elite to take an ambitious stance in climate governance. But the analysis in this article demonstrates how the complex multi-level architecture actually allows them to maintain those low ambitions, and how it can even strengthen that tendency. Nevertheless, recent developments in Wallonia indicate that the limiting effects and inertia of the Belgian system can be breached when a willing political actor comes forward. The formulation of the new Walloon climate plan will point out whether those dynamics can counter the conclusions outlined here, and come forward with ambitious policy measures. As for now, no ambitious climate policies have been adopted in Belgium for the post-2012 period.

The analysis of subnational climate policies in Belgium should be regarded as a critical case in multi-level climate governance, both in Western democracies as well as in newly industrializing countries. It shows how a multi-level system, besides offering multiple opportunities to subnational governments, can also have a inhibiting effect and be conducive to policy failures. It indicates a need to avoid blind optimism with respect to multi-level solutions, and urges both scholars and policy-makers to consider other and additional ways to deal with climate change in a complex political landscape.

Notes

1. The article builds on earlier research documented by (Happaerts et al. 2012), who focused especially on intergovernmental relations for climate change. An earlier version of this manuscript was presented at the Thematic Workshop of the Indian–European Multilevel Climate Governance Research Network, 20–22 November 2013, at Kolkata.
2. The current European sovereign debt crisis has triggered a debate among Belgian political parties on how stringent EU recommendations actually are, for instance in the context of the European semester. Moreover, it stimulated a new wave of 'euroskepticism' within the EU, also in Belgium.
3. The ETS is the EU's system of emissions trading that allocated allowances for GHG emissions to industrial installations in the member states, based on a 'cap and trade' principle (European Commission 2010).
4. The Kyoto Protocol had at its heart three 'flexible mechanisms': emissions trading (e.g. the EU ETS), Joint Implementation (JI), which allowed industrialized, so-called Annex I countries to offset emissions in other Annex I countries in exchange for carbon credits, and the Clean Development Mechanism (CDM), which foresaw the possibility of Annex I countries to invest in low-carbon projects in non-Annex I countries in exchange for credits counting toward the fulfillment of their Kyoto target.
5. By 2020, the EU aims to reduce GHG emissions by 20% (by 30% if a global agreement including comparable targets for other industrialized countries is reached), to reduce energy consumption by 20% and to achieve 20% of renewable energy (European Council 2007).
6. As from the period 2013–2020, the emissions in the sectors falling under the ETS will be assigned at the European level and do not require national allocation anymore. Their reduction target for 2012 is 21% compared to 2005 levels. The emissions not covered by the ETS – in essence those stemming from agriculture, transport, buildings and energy – were subject to

a new internal deal on 'effort sharing' to divide the 10% target compared to 2005 levels. The two targets combined should achieve an overall 20% reduction of GHG emission in the EU in relation to 1990 levels.

7. The focus is on the policy plans and strategies that aim specifically at reducing GHG emissions. In addition to the policies discussed here, the Belgian Regions also conduct (renewable) energy policies that are relevant in the context of climate change mitigation.
8. A final assessment can only be made early 2014, when the emission data of 2012 will be known. At the time of writing, the Flemish government estimates that, after the implementation of the domestic measures, a reduction gap of about 19 Mt will remain (Vlaamse Overheid 2011). In order to reach the Kyoto target, that gap will thus have to be filled through the purchase of credits, which will significantly increase the total share of flexible mechanisms in the Flemish climate policy.
9. The nine priority themes are building; urban and spatial planning; transport; the government's exemplary role; waste; economy and employment; taxation; financing; and energy supply and production (Brussels Hoofdstedelijk Gewest 2009a).

Disclosure statement

No potential conflict of interest was reported by the author.

References

Andonova LB, Mitchell RB. 2010. The rescaling of global environmental politics. Annu Rev Env Res. 35:255–282.

Beyers J, Bursens P. 2006a. Europa is geen buitenland. Over de relatie tussen het federale België en de Europese Unie [Europe is not a foreign country. On the relation between federal Belgium and the European Union]. Leuven: Acco.

Beyers J, Bursens P. 2006b. The European rescue of the federal state: how Europeanisation shapes the Belgian state. West Eur Polit. 29:1057–1078.

Bollen A, De Clercq W, Tas M, Wittebolle L, Wittoeck P, Van den Bosch M. 2006. Kyoto: van beleidskader tot bedrijfsstrategie. Mechelen: Wolters Kluwer Belgium NV.

Brans M, Pelgrims C, Hoet D. 2005. Politico-administrative relations under coalition governments: the case of Belgium. In: Guy Peters B, Verheijen T, Vass L, editors. Coalitions of the unwilling: politicians and civil servants in coalition governments. Bratislava: NISPAcee; p. 207–235.

Brussels Hoofdstedelijk Gewest. 2002. Plan voor structurele verbetering van de luchtkwaliteit en de strijd tegen de opwarming van het klimaat 2002–2010. Brussels: Brussels Instituut voor Milieubeheer.

Brussels Hoofdstedelijk Gewest. 2009a. Het Klimaatplan. Leefmilieu Brussel; [cited 2012 Mar 3]. Available from: http://www.leefmilieubrussel.be/Templates/Particuliers/informer.aspx?id=3900&langtype=2067

Brussels Hoofdstedelijk Gewest. 2009b. Het Pact van de Burgemeesters. Leefmilieu Brussel; [cited 2012 Mar 5]. Available from: http://www.leefmilieubrussel.be/Templates/Particuliers/informer.aspx?id=3896&langtype=2067

Bulkeley H. 2013. Cities and climate change. Abingdon: Routledge.

Conix L. 2009. Het federale CDM/JI beleid. Evaluatie van de beleidsimplementatie [master's thesis]. Leuven: Faculteit Sociale Wetenschappen, opleiding Vergelijkende en Internationale Politiek, Katholieke Universiteit Leuven.

Council of the EU. 2002. Decision of 25 April 2002 concerning the approval, on behalf of the EC, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder (doc 2002/358/EC). Brussels: Council of the European Union.

Covenant of Mayors. 2012. Covenant of Mayors. Committed to local sustainable energy. Covenant of Mayors Office; [cited 2012 Mar 5]. Available from: http://www.eumayors.eu/index_en.html

De Mulder J. 2005. Building a climate policy in Belgium: flexible mechanisms in a flexible state? ELNI Rev. 2005:29–39.

Engel KH. 2009. Whither subnational climate change initiatives in the wake of federal climate legislation? Publius. 39:432–454.
Engel KH, Orbach BY. 2008. Micro-motives and state and local climate change initiatives. Harvard Law Policy Rev. 2:119–137.
European Council. 2007. Presidency conclusions. 2007 Mar 8–9. Brussels: European Council.
European Commission. 2010. Emissions trading system (EU ETS). Climate action; [cited 2012 Mar 26]. Available from: http://ec.europa.eu/clima/policies/ets/index_en.htm
European Commission. 2011. A roadmap for moving to a competitive low carbon economy in 2050. COM(2011) 112 final. Brussels: European Commission.
[FOD Kanselarij] Federale Overheidsdienst Kanselarij van de Eerste Minister. 2008. De Secretarie van het Overlegcomité; [cited 2012 Feb 27]. Available from: http://kanselarij.belgium.be/nl/secretariaten_en_overleg/overlegcomite/
[FOD VVVL] Federale Overheidsdienst Volksgezondheid Veiligheid van de Voedselketen en Leefmilieu. 2008. Bevoegdheden. Federale Dienst Klimaatverandering; [cited 2010 Nov 18]. Available from: http://www.klimaat.be/spip.php?article23&fs=
[FOD VVVL] Federale Overheidsdienst Volksgezondheid Veiligheid van de Voedselketen en Leefmilieu. 2009. Reductiedoelstelling en nationale lastenverdeling. Federale Dienst Klimaatverandering; [cited 2010 Nov 18]. Available from: http://www.klimaat.be/spip.php?article204&fs=
Gupta J. 2007. The multi-level governance challenge of climate change. Environ Sci. 4:131–137.
Happaerts S. 2012. Sustainable development in Wallonia: trial and error along two tracks of governance. In: Bruyninckx H, Happaerts S, Van den Brande K, editors. Sustainable development and subnational governments. Policy-making and multi-level interactions. Basingstoke: Palgrave Macmillan; p. 85–102.
Happaerts S, Schunz S, Bruyninckx H. 2012. Federalism and intergovernmental relations: The multi-Level politics of climate change policy in Belgium. J Contemp Eur Stud. 20:441–458.
[IEW] Inter-Environnement Wallonie. 2013. Stratégie climatique wallonne : les défis sont planifiés. Fédération Inter-Environnement Wallonie des associations au service de l'environnement; [cited 2013 Aug 16]. Available from: http://www.iewonline.be/spip.php?article5800
Jans MT, Tombeur H. 2000. Living apart together: the Belgian intergovernmental cooperation in the domains of environment and economy. In: Braun D, editor. Public policy and federalism. Aldershot: Ashgate; p. 142–176.
Jörgensen K, Jogesh A, Mishra A. This volume. Editorial: multi-level climate governance and the role of the subnational level.
LNE. 2012. Stand van zaken voorbereiding Vlaams Mitigatieplan. Vlaamse Overheid, Departement Leefmilieu, Natuur en Energie; [cited 2012 Nov 14]. Available from: http://www.lne.be/themas/klimaatverandering/vlaams-klimaatbeleidsplan-2013-2020/voorbereiding-mitigatieplan
Maesschalck J, Van De Walle S. 2006. Policy failure and corruption in Belgium: is federalism to blame? West Eur Polit. 29:999–1017.
McEwen N, Bomberg E. 2014. Sub-state climate pioneers: the case of Scotland. Reg Federal Stud. 24:63–85.
[Minaraad] Milieu- en Natuurraad van Vlaanderen. 2009. De beleidsnota Leefmilieu en Natuur Advies van 26 November 2009. Brussel: Minaraad.
Ministère de la Région wallonne. 2001. Plan d'action de la Région Wallonne en matière de changements climatiques adopté par le Gouvernement wallon le 18 juillet 2001. Namur: Ministère de la Région wallonne.
Ministère de la Région wallonne. 2008. Plan Air-Climat Respirer mieux, c'est vivre mieux. Namur: Ministère de la Région wallonne, Direction générale des Ressources naturelles et de l'Environnement.
Ministerie van de Vlaamse Gemeenschap. 2003. Vlaams Klimaatbeleidsplan 2002–2005. Brussel: Taskforce Klimaatbeleid Vlaanderen, AMINAL, Ministerie van de Vlaamse Gemeenschap.
Osborne D. 1988. Laboraties of democracy. Boston (MA): Harvard Business School Press.
Parlement wallon. 2009. Déclaration de politique régionale wallonne. 'Une énergie partagée pour une société durable, humaine et solidaire', 16 juillet 2009. 8 (SE 2009) – N° 1.
Peters BG. 2006. Consociationalism, corruption and chocolate: Belgian exceptionalism. West Eur Polit. 29:1079–1092.

Rabe BG. 2003. Power to the states. The promise and pitfalls of decentralization. In: Vig NJ, Kraft ME, editors. Environmental policy. New directions for the twenty-first century. Washington (DC): CQ Press; p. 33–56.
Rabe BG, Roman M, Dobelis AN. 2006. State competitioin as a source driving climate change mitigation. Environ Law J. XIV:1–736.
Reuchamps M, Onclin F. 2009. La fédération belge. In: Fournier B, Reuchamps M, editors. Le fédéralisme en Belgique et au Canada. Comparaison sociopolitique. Bruxelles: De Boeck; p. 21–40.
Royles E, McEwen N. 2013. Climate change policy, multi-level governance and inter-governmental relations in a devolved UK. Paper Read at the 7th ECPR General Conference; Sep 4–7; Bordeaux.
Skogstad G. 2000. Canada: dual and executive federalism, ineffective problem-solving. In: Dietmar B, editor. Public policy and federalism. Aldershot: Ashgate; p. 57–77.
[SERV] Sociaal-Economische Raad van Vlaanderen, [Minaraad] Milieu- en Natuurraad van Vlaanderen. 2009. Advies Voortgangsrapport 2008 van het Vlaams Klimaatbeleidsplan 2006–2012 Gezamenlijk advies van 2 April 2009. Brussel: SERV & Minaraad.
Swenden W. 2006. Federalism and regionalism in Western Europe. A comparative and thematic analysis. Houndmills: Palgrave Macmillan.
Swenden W, Brans M, De Winter L. 2006. The politics of Belgium: institutions and policy under bipolar and centrifugal federalism. West Eur Polit. 29:863–873.
Swenden W, Jans MT. 2006. 'Will it stay or will it go?' Federalism and the sustainability of Belgium. West Eur Polit. 29:877–894.
Van den Brande K. 2012. Intergovernmental cooperation for international decision-making in federal states: the case of sustainable development in Belgium. Reg Federal Stud. 22:407–433.
Van den Brande K, Happaerts S, Bruyninckx H. 2011. Multi-level interactions in a sustainable development context. Different routes for Flanders to decision-making in the UN commission on sustainable development. Environ Policy Governance. 21:70–82.
Van Hecke K, Zgajewski T. 2008. The Kyoto Policy of Belgium. Egmont paper 18. Brussels: Academia Press.
Vlaamse Overheid. 2006. Het Vlaams Klimaatbeleidsplan 2006-2012. Het klimaat verandert. U ook? Brussel: Departement Leefmilieu, Natuur en Energie.
Vlaamse Overheid. 2011. Voortgangsrapport 2010 van het Vlaams Klimaatbeleidsplan 2006–2012. Brussel: Vlaamse Minister van Leefmilieu, Natuur en Cultuur.
Vlaamse Overheid. 2013. Vlaams Klimaatbeleidsplan 2013–2020. Brussel: Departement Leefmilieu, Natuur en Energie.
Volden C. 1997. Entrusting the states with welfare reform. In: Ferejohn JA, Weingast BR, editors. The new federalism. Can the states be trusted? Stanford: Hoover Institution Press; p. 65–96.
Wallonie. 2011. Vers une Wallonie Bas-carbone en 2050 Résumé exécutif. Namur: Climact & Agence wallonne de l'air et du climat.
Wallonie. 2012a. Décret Climat adopté en première lecture. Portail de la Wallonie; [cited 2013 Aug 16]. Available from: http://www.wallonie.be/fr/actualites/decret-climat-adopte-en-premiere-lecture
Wallonie. 2012b. FAST START Wallonie Construisons l'avenir ensemble. Agence wallonne de l'air et du climat; [cited 2012 Mar 2]. Available from: http://airclimat.wallonie.be/spip/FAST-START-Wallonie-Construisons-l.html